REMARKS

Reconsideration of the above identified application in view of the amendments and remarks following is respectfully requested.

The claims have been amended to specify that the activator is alumoxane. Support for the amendment is found in Example 13 and page 10, the second and third paragraphs. The claims have also been amended to specify that "D" is a Group 4 metal. Support for the amendment is found in the examples.

Claims 1-3, 5, 7-11, 14-22, 24-28, 31 and 32 are before the examiner.

The parent application, USSN 09/396,266, was before the Honorable Board of Appeals and Interferences. It was recently realized that applicant, by his attorney, had failed to address all the issues presented in the Final Rejection, namely the rejections under 35 USC § 112. In view of the inadvertent omission, the application was withdrawn from Appeal and this Continuing Application filed so as to completely address all issues raised in the Final Rejection in USSN 09/396,266.

In the Final Rejection, claims 1 – 32 (In the Examiner's Answer claims 1-3, 5-20 and 22- 32) were rejected under 35 USC §112, second paragraph.

Claims 1, 13, 30 and 18 (In the Examiner's answer claims 1, 12, 13, 18, 29, and 30) were rejected because of the definition of J and Y. D is now defined as a Group 4 metal, J as a Group 16 element and Y as a heteroatom, a substituted heteroatom or a C_1 to C_{100} hydrocarbyl group that may optionally contain one or more heteroatom(s).

Accordingly, all bonds in the molecule are now satisfied and there is neither a shortage of bonds nor an excess of bonds. Withdrawal of the rejection under 35 USC §112 is respectfully requested.

Claims 9 and 26 were rejected because of the definition of Y. Y now is defined as a heteroatom, a substituted heteroatom or a C_1 to C_{100} hydrocarbyl group that may optionally contain one or more heteroatom(s). In view of the amendments, it is respectfully submitted that the claims now satisfy 35 USC §112. Withdrawal of the rejection under 35 USC §112 is respectfully requested.

Claims 5 and 12 were rejected for lacking antecedent basis for the terms "indene" and "fluorene." In view of the amendment to the claims it is respectfully submitted that 35 USC §112 is now satisfied. Withdrawal of the rejection under 35 USC §112 is respectfully requested.

Section 103 Rejection

Claims 1 –32 (In the Examiner's answer, claims 1-3, 5- 20 and 22-32) were rejected under 35 USC §103 (a) as being unpatentable over *Tsutsui et al.* (hereinafter Tsutsui). This rejection is respectfully traversed.

It is the Examiner's position that the *Tsutsui* formula encompasses the metallocene compound of applicant's claims. It is respectfully submitted that only with the benefit of Applicant's disclosure would one of ordinary skill in the art obtain the mono cyclopentadienyls from *Tsutsui's* disclosure. A complete reading of *Tsutsui* demonstrates only biscyclopentadienyl or tricyclopentadienyl metallocenes. Col. 4, line 57 carried over to Col 6, line 48 and all the examples only relate to metallocenes comprising two or more cyclopentadienyls and particularly bis-cyclopentadienyl metallocenes. There is no evidence within the four corners of the *Tsutsui* disclosure of any monocyclopentadienyl compound. Only with the benefit of applicant's disclosure would one of skill in the art obtain monocyclopentadienyl metallocenes from the teachings of *Tsutsui*.

It is furthermore respectfully submitted that the Examiner errs in stating that *Tsutsui* "does generically teach the mono(cyclopentadienyl) compound." *Tsutsui* unequivocally does teach the bis-cyclopentadienyls but does not teach

monocyclopentadienyl. These compounds may be within the scope of the formula but such a generic disclosure cannot be considered as a teaching of a specific group of compounds when there is neither a specific teaching of how to make such compounds or how to use such compounds.

Most importantly, there is no teaching within the four corners of *Tsutsui* of how to make or prepare a monocylopentadienyl compound within the scope of the generic *Tsutsui* formula. Without a teaching of how to make such compounds, there can be no obviousness attached to the specific compounds that the Examiner suggests are contained in the *Tsutsui* teaching. It is well-established law that one must attach a preparation together with a new compound in order for the so-called new compound to be considered as prior art. Without such preparation teachings one could name compounds not in the art and thereby prevent others from obtaining patents on real inventions. Withdrawal of the rejection is respectfully asked.

Claims 1-32 (In the Examiner's answer claim 1-3, 5-20 and 22 – 32 were rejected under 35 USC 103 (a) as being unpatentable over *Campbell, Jr.*, US 5,206,197 (hereinafter Campbell). This rejection is respectfully traversed. The claims as now amended have the activators named as alumoxane. *Campbell* does not disclose or make obvious alumoxane activators. Example 13 in the instant application unequivocally demonstrates that the catalyst system including the claimed metallocene in combination with alumoxane demonstrate unexpected results. It is respectfully submitted that it would not be obvious for the ordinary practitioner to substitute the NCA activators employed in *Campbell* for styrene polymerizations to a syndiotactic vinyl polymer for applicant's alumoxanes and employ such a new modified catalyst for olefin polymerization. There is a complete lack of motivation for the ordinary practitioner to modify *Campbell's* catalyst system to arrive at applicant's catalyst system.

See Spec. only. MAO is a better activator

In view of the above amendments and remarks, it is respectfully submitted that the claims in this case are now in condition for allowance. Prompt notice of allowance is respectfully solicited.

Respectfully submitted,

4.3.03
Date

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Marked up claims showing additions as underlines and deletions as bracketed

1. (Once amended) A process for the polymerization of olefins comprising contacting olefins with a catalyst system comprising [an activator] alumoxane and a catalyst precursor represented by the formula

$$CpD^a(JY)(Q)_{(a-2)},$$

wherein:
Cp is a substituted cyclopentadienyl or a substituted or unsubstituted cycloalkadienyl group other than cyclopentadienyl or a related cycloalkadienyl cogener,
each Q is independently an anionic leaving group,
J is a Group [15,] 16 [or 17] atom,
a is the oxidation state of D,
D is a Group 4 metal, [5 or 6 metal,] provided however that when Cp is mono-cyclic unsubstituted cyclopentadienyl group, [M] D is not titanium, and
Y is a heteroatom, a substituted heteroatom or a C_1 to C_{100} hydrocarbyl group that may optionally contain one or more heteroatom(s).

5. (Once amended) The process of claim 3 wherein Cp is a substituted indenyl or fluorenyl group [the indene or fluorine is substituted].

Please cancel claim 6 in its entirety.

9. (Once amended) The process of claim 1 wherein Y is [a substituted or unsubstituted Group 13 - 17 heteroatom or] a C_1 to C_{40} alkyl, alknyl, aryl, or aryl alkyl group.

Please cancel claim 12 in its entirety.

Please cancel claim 13 in its entirety.

18. (Once amended) A composition comprising [an activator] alumoxane and a catalyst precursor represented by the formula

$$CpD^{a}(JY)(Q)_{(a-2),}$$

wherein:
Cp is a substituted cyclopentadienyl or a substituted or unsubstituted cycloalkadienyl group other than cyclopentadienyl or a related cycloalkadienyl cogener,
each Q is independently an anionic leaving group,
J is a Group [15,] 16 [or 17] atom,
a is the oxidation state of D,
D is a Group 4 metal, [5 or 6 metal,] provided however that when Cp is mono-cyclic unsubstituted cyclopentadienyl group, [M] D is not titanium, and
Y is a heteroatom, a substituted heteroatom or a C_1 to C_{100} hydrocarbyl group that may optionally contain one or more heteroatom(s).

22. (Once Amended) The composition of claim 18 wherein Cp is a substituted indenyl or flourenyl group [the indene or fluorine is substituted].

Please cancel claim 23 in it entirety.

26. (Once amended) The composition of claim 18 wherein Y is [a substituted or unsubstituted Group 13 - 17 heteroatom or] a C_1 to C_{40} alkyl, alknyl, aryl, or aryl alkyl group.

Please cancel claim 29 in its entirety.

Please cancel claim 30 in its entirety.